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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,859	09/05/2003	John A. Barton	2003-IP-010400 UI USA	7274

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Albert C. Metrailler
Conley Rose
5700 Granite Parkway, Suite 330
Plano, TX 75024-6616

EXAMINER

CHAMBERS, TROY

ART UNIT PAPER NUMBER

3641

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/655,859

Applicant(s)

BARTON ET AL.

Examiner

Troy Chambers

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 19-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 6,7 and 14-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1-5, 8-13** are rejected under 35 U.S.C. 102(b) as being anticipated by US 4998477 issued to Barker.

3. With respect to claim 1, Barker discloses a detonator system for detonating cord. The system includes:

- | | | |
|------|-------------------------------------|-------------------|
| a. | a firing head | 14 |
| i. | a chamber to receive a detonator 15 | Fig. 1 |
| ii. | an upper sealing surface | Fig. 1, left end |
| iii. | a lower sealing surface | Fig. 1, right end |
| iv. | upper sealing surface o-rings | 13 |
| b. | a booster charge holder | 21 |
| v. | upper sealing surface | Fig. 2, right end |
| vi. | bulkhead | 25 |

The booster charge holder upper surface and bulkhead are adapted to form a fluid and pressure seal because they are designed to cooperate with a retainer 17, the retainer designed to cooperate with a boot designed to seal against fluid and pressure intrusion.

The Examiner interprets the phrase "adapted for forming a fluid and pressure seal" as not actually requiring the components to form a seal but merely assist in the ability to do so. In the applicant's device, neither the firing head nor booster charge holder is capable of forming a seal. The only members capable of sealing are the o-rings 32. Barker provides a similar arrangement in which the various components are nestled together so that the boot 18 can slide over there over and perform a sealing function.

4. With respect to claim 2, Barker discloses a detonator chamber as discussed above and o-rings 13.

5. With respect to claim 3, Barker discloses a pressure and fluid resistant seal boot 18 having an inner surface and outer surface and a first end (left end) and a second end (right end). Both surfaces form an enclosure in which the firing head is received. As a result, an inner surface of the booster charge chamber and booster charge is sealed against fluid intrusion.

6. With respect to claim 4, the boot 18 forms a seal with chord 19 as shown in Figs. 1 and 2.

7. With respect to claim 5, the right end (2nd end) has a diameter smaller than the left end (1st end).

8. With respect to claims 8 and 9, refer to Fig. 2.

9. With respect to claim 10, Barker discloses a detonator 15 and wire line sub 11.

10. With respect to claim 11, refer to Fig. 2 which shows the various components such as the booster charge holder 21 and firing head 14 and boot 18 nestled together to form a sealing engagement.

11. With respect to claim 12, Barker discloses a booster charge 20.
12. With respect to claim 13, Barker discloses cord 19.

Response to Arguments

13. Applicant's arguments filed 02/06/06 have been fully considered but they are not persuasive.
14. The applicant argues that the ability to seal against fluid does not inherently include the ability to seal against pressure, as exemplified by applicant's balloon discussion. However, the Examiner was not making a broad statement applicable to every situation such as balloons. The Examiner was specifically referring to detonators such as those disclosed in Barker that are subjected to extreme pressures and temperatures. In any event, Barker expressly discloses that the device is resistant against pressure and fluid.
15. The applicant also argues that Barker does not provide a pressure and fluid seal at the lower end of the detonator chamber. However, the Examiner's interpretation of claim 1 clearly shows this statement to be inaccurate. Moreover, the Examiner would like to point out that the applicant does not appear to expressly claim a fluid and pressure seal. The phrase, "adapted for forming a fluid and pressure seal" can be interpreted on the one hand as requiring a seal or, on the other hand as possessing the ability to form a seal. As discussed above, neither the firing head nor the booster charge holder is capable of forming a seal. Only the O-rings, which are separate elements, are capable of forming the alleged fluid and pressure seal. To interpret the claims as expressly requiring a seal would lead the Examiner to invoke 35 USC 112,

first paragraph (enablement) because the specification does not show or disclose the two separate elements (firing head and booster charge holder) as capable of forming a seal.

Additionally, the Examiner suggests the applicant be more specific when referring to the pressure and fluid in the claims. For example, what fluids is the applicant referring to? Specifically, how much pressure is necessary to invade the inner portion of Barker's device? The Examiner is required to interpret the claims broadly interpret the claims. Therefore, would it not be unreasonable to interpret the fluid and pressure as being readable on atmospheric pressure and atmospheric fluid? If the device were not capable of surviving at least atmospheric pressures and fluids then it would be inoperable.

16. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., O-rings, fluid seals at the lower end of the detonator chamber) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Allowable Subject Matter

17. Claims 6, 7 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3641

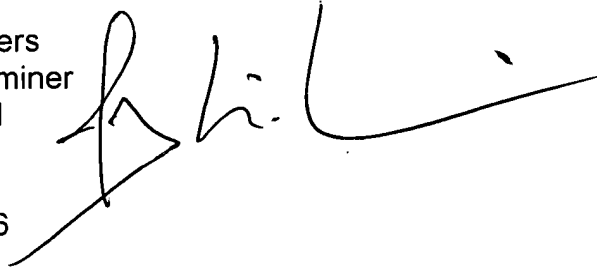
Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited on form PTO-892 are cited as of interest to show similar detonator systems.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (571) 272-6874 between the hours of 7:00 a.m. to 3:30 p.m., M-F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (571) 272-6873.

Troy Chambers
Primary Examiner
Art Unit 3641

TC
05 April 2006

A handwritten signature in black ink, appearing to read 'T. Chambers', written over the printed name and title.